

### REMARKS

On page 11 of the Office Action, the Examiner provides a conclusory statement without providing any specific and factual evidence. In particular, the Examiner states that Applicants argue that Brown teaches away from Chen from each other. In response, the Examiner states “[i]n response, Brown does not teach away of Chen. Therefore, the combination of Brown and Chen can be maintained.” Office Action at page 11.

The Examiner provides no evidence to counter Applicants’ rebuttal evidence.

Recall that to rebut a *prima facie* case of obviousness, Applicants can show, under M.P.E.P. § 2145(X)(D)(2), that “[i]s improper to combine reference where the references teach away from their combination”.

The specific and factual rebuttal evidence provided by Applicants previously:

Brown specifically teaches away from the use of frequency multiplier circuitry and frequency divider circuitry.

“Operating the VCO 248 at the same frequency as the incoming RF signal has the **advantage of eliminating the need for multiplier or divider circuitry** that would normally be associated with the amplifier 252. **Eliminating this additional circuitry that is traditionally used results in a lower current, smaller and lower cost solution.**” Brown at col. 17, lines 18-23.

On the other hand, Chen, not only uses frequency multiplier circuitry and frequency divider circuitry, but needs to use frequency multiplier circuitry and frequency divider circuitry to facilitate the Chen invention. See, e.g., Chen at FIG. 5 at “Divide By N” block 328, “Divide by K” block 326 and “Multiply by (N+1)” block 330. Chen must use frequency multiplier circuitry and frequency divider circuitry to facilitate the synchronization that is necessary for a synchronous plesiochronous digital

hierarchy (SPDH) system. As explained, Chen needs the frequency multiplier circuitry and the frequency divider circuitry to "send exactly one SYNC byte and N bytes of data for every N+1 clock cycles of the clock". Chen at col. 7, lines 28-30.

Thus, while Chen requires frequency multiplier circuitry and frequency divider circuitry, Brown teaches away from Chen by finding it advantageous to eliminate "the need for multiplier or divider circuitry".

Since Brown teaches away from Chen, it is respectfully submitted that M.P.E.P. § 2145(X)(D)(2) states that it is improper to combine Brown and Chen.

Thus, Applicants have provided specific and factual evidence in Brown that rebuts the *prima facie* case of obviousness. This manner of rebutting a *prima facie* case of obviousness is well established in the M.P.E.P. under M.P.E.P. § 2145 entitled "Consideration of Applicant's Rebuttal Arguments".

On the other hand, the Examiner has provided no specific and factual evidence that rebuts Applicants' specific and factual rebuttal evidence.

It is respectfully requested that the Examiner reconsider the specific and factual rebuttal evidence presented by Applicants.

Applicants also provided specific and factual rebuttal evidence in Chen that Chen teaches away from wireless communications and has teaches that wired communications are superior.

The specific and factual rebuttal evidence provided by Applicants previously:

In fact, Chen states that "[o]ne of the most important communication media is fiber optic because it can transmit signals having extremely high signaling rate and is immune to

many sources of noise". Chen at col. 2, lines 9-11.

Brown's teaching of a radio of wireless communications teaches away from Chen's teaching of a SPDH system for use with a fiber optic system. Brown's radio is vulnerable to many types of noise that are specific to wireless radios and yet are not an issue for Chen's fiber optic system. Brown's radio is subject to multipath and external radio sources that cause noise. Thus, Brown's radio teaches away from Chen's fiber optic system uses cable to shield and to guide the cable signal, thereby making the cable signal immune to multipath and external radio issues.

Since Brown teaches away from Chen, it is respectfully submitted that M.P.E.P. § 2145(X)(D)(2) states that it is improper to combine Brown and Chen.

Thus, Applicants have provided specific and factual evidence in Chen that rebuts the *prima facie* case of obviousness. This manner of rebutting a *prima facie* case of obviousness is well established in the M.P.E.P. under M.P.E.P. § 2145 entitled "Consideration of Applicant's Rebuttal Arguments".

On the other hand, the Examiner has provided no specific and factual evidence that rebuts Applicants' specific and factual rebuttal evidence.

It is respectfully requested that the Examiner reconsider the specific and factual rebuttal evidence presented by Applicants.

In view of at least the above, the combination of Chen and Brown should not be maintained.

Although Applicants believe that the pending claims are patentable over the prior art of record for at least the reasons as set forth in the record, Applicants have amended at least some

of the claims to expedite prosecution, to further clarify the subject matter therein and/or to correct informalities noted by Applicants.

Claims 1-14, 19-21, 32, 37, 42, 43, 51-77, 85-90, 92-95, 100-102, 112-118, 122, 123 and 164 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Brown.

Applicants have amended the independent claims in a similar fashion.

For example, independent claim 1 now recites, in part, “wherein the receiver comprises a low intermediate frequency (IF) heterodyne architecture, wherein the transmitter, the receiver and a local oscillator (LO) are integrated on a single integrated circuit chip, wherein the LO comprises a voltage controlled oscillator (VCO), a frequency divider and a mixer, wherein an output of the VCO is operatively coupled to an input of the frequency divider and to an input of the mixer, wherein an output of frequency divider is operatively coupled to the input of the mixer, and wherein the output of the mixer is operatively coupled to a downconverter of the receiver that downconverts the received first signal and to an upconverter of the transmitter, wherein the second signal has been upconverted by the upconverter of the transmitter”.

It is respectfully submitted that at least the above elements are not described in Brown as alleged.

Similar arguments can be made with respect to amended independent claims 32, 51, 85 and 112.

For at least the above reasons, Brown, as alleged, does not anticipate independent claims 1, 32, 51, 85 and 112.

It is respectfully requested that the rejection under 35 U.S.C. § 102(e) be withdrawn with respect to claims 1-14, 19-21, 32, 37, 42, 43, 51-77, 85-90, 92-95, 100-102, 112-118, 122, 123 and 164.

Claims 15, 38 and 96 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Okada. Claims 16-18, 39-41 and 97-99 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Okada and further in view of Chen. Claims 22-

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24, 103-105 and 119-121 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Chen.

However, in view of the amendments to the independent claims, the combination of Brown and other documents, as alleged, no longer presents a *prima facie* case of obviousness.

“The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.” M.P.E.P. § 2142.

It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 15, 38, 96, 16-18, 39-41, 97-99, 22-24, 103-105 and 119-121.

Applicants do not necessarily agree or disagree with the Examiner’s characterization of the documents made of record, either alone or in combination, or the Examiner’s characterization of recited claim elements. Furthermore, Applicants respectfully reserve the right to argue the characterization of the documents of record, either alone or in combination, to argue what is allegedly well known, allegedly obvious or allegedly disclosed, or the characterization of the recited claim elements should that need arise in the future.

Applicants respectfully reserve the right to pursue, without prejudice, amended, cancelled and/or withdrawn subject matter as set forth in the claims in a related and/or continuing application.

With respect to the present application, Applicants hereby rescind any disclaimer of claim scope made in the parent application or any predecessor or related application. The Examiner is advised that any previous disclaimer of claim scope, if any, and the alleged prior art that it was made to allegedly avoid, may need to be revisited. Nor should a disclaimer of claim scope, if any, in the present application be read back into any predecessor or related application.

In view of at least the foregoing, it is respectfully submitted that the present application is in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-

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listed telephone number.

The Commissioner is hereby authorized to charge any additional fees, to charge any fee deficiencies or to credit any overpayments to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Date: November 3, 2008

Respectfully submitted,

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